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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/522,078	07/05/2005	Harald Weigelt	STERN22.001APC	6848

20995 7590 07/22/2010
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EXAMINER

LEE, LAURA MICHELLE

ART UNIT	PAPER NUMBER
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3724

NOTIFICATION DATE	DELIVERY MODE
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07/22/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/522,078	Applicant(s) WEIGELT, HARALD	
	Examiner LAURA M. LEE	Art Unit 3724	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 July 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15, 17-20 and 24-27 is/are pending in the application.
- 4a) Of the above claim(s) 6, 10 and 13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-9, 11-12, 14-15, 17-20, and 24-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7/14/2010 has been entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 26 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 26, recites, "wherein the front surface has a bevel angle between 5 and 10 degrees. However, the specification as originally filed cites that in the embodiment of Figs. 2 and 3, a bevel angle is preferably selected of up to 5 degrees. Additionally, the

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specification refers to the embodiments of Figures 5 to 8, citing that the bevel angle is preferably up to 10 degrees (see page 17, third paragraph). No where in the specification is the intermediate range of 5 to 10 degrees disclosed? It does not appear that applicant had possession of the range of 5 to 10 degrees as originally filed.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-3, 5, 7-9, 11-12, 14-15, 17-20, 24-25 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wales (U.S. Patent 2,168,377) in view of Taylor (U.S. Patent 2,760,574) and in further view of Vlahek (U.S. Patent 4,428,262), Hugo (U.S. Patent 4,246,815) and Blais (U.S. Patent 3,465,634). Wales discloses a stripping device (Figure 1/7) for use with a cutting tool (ram, 21 and punching unit 34-36,) with a cutting element (punch tip 34,36/ square bit 65) for machining a workpiece (punch a hole), the stripping device comprising: at least one fastening piece (i.e. screw 37) for fastening the stripping device to the cutting tool; a spring elastic element (spring 41) which is arranged outside of the workpiece contact region and around the cutting element (punch tip 34, 36/ square bit 56); a stripping element (punch guide/stripper 40,) which surrounds the cutting element (punch tip 36) and has a front surface which comes into contact with the workpiece (i.e. see Figure 2), and at least one guide element

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(punch holder, 94) having an outer surface with a circular cross-section (at several locations), where the guide element comprises a hole or opening (not numbered containing the stripper 40) with a cross-section substantially similar to the cross-section of the stripping element.

Wales does not disclose wherein the stripping element has a non-circular cross-section and the guide element has a cross-section corresponding in shape with the non-circular cross section of the stripping element, the entire surface of the hole being formed by a single homogeneous piece of material, wherein the guide element is configured to guide the stripping element and independently prevent the stripping element from rotation. Wales does disclose that the stripping element is prevented from rotating by the guide element by the use of a slot 96, and screw 73 engagement (col. 5, lines 45-56) but not by the two elements having a non-circular cross section. However, attention is further directed to the Taylor cutting tool and stripping device. Taylor discloses, as similarly shown by Wales, the use of a set screw (pin, 30) and a vertical slot (31) prevent the stripper (26) from rotating in the hole (25) formed by the guide element. However, Taylor also discloses alternatively providing the stripper with a shape that prohibits turning of the stripper in the hole, especially during reciprocating movements of the stripper without the use of the pin and slot (see col. 3, lines 4-19). Taylor discloses that preventing rotation of the stripper benefits the punching stroke in eliminating binding in the tool and assures that parts are accurately aligned and oriented with respect to cooperating parts, especially if the punch is to be substituted for one with a noncylindrical cross-section. It would have been obvious to one having ordinary skill

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in the art to have similarly incorporated a non-circular stripping element in the Wales device as taught by Taylor as an additional means or as a replacement means to the non-rotational slot 174 and screw 73 combination, as an alternative means of preventing the rotating of the Wales stripping element thereby preventing any resulting tool binding and assuring proper tool alignment between cooperating parts.

Therefore, the modified device of Wales discloses wherein the stripping element (65/ Taylor 27) has a non-circular cross-section and the guide element (94/ Taylor 22) has a cross-section corresponding in shape with the non-circular cross section of the stripping element, the entire surface of the hole being formed by a single homogeneous piece of material, wherein the guide element is configured to guide the stripping element and independently prevent the stripping element from rotation.

Wales also does not disclose wherein the front surface of the stripping element is beveled. However, beveling an edge of a surface is well known in the art for breaking the sharp edge as a safety measure. Furthermore, attention also further directed to the Vlahek, Hugo and Blais references which also disclose punching machines that utilize a stripping element. Vlahek discloses providing the stripping element (12) with "a slightly convex and beveled outer periphery" as shown in Figure 2. Hugo also discloses that the striking surface of the stripping element (insert 50) is also "beveled in a conical locus". Furthermore, Blais also teaches providing a beveled face (25) on the stripping device (cylinder 21). Blais also discloses that "the particular shape of this die face 25 is not highly critical although the applicant has found that an angular arrangement with respect to the axis of the cylinder of approximately 40 degrees is highly efficient and

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provides proper cutting. It should be obvious that this particular plunger face 25 could be of many different shapes depending upon the particular opening being cut into the material M..." Therefore, as evidenced by Vlahek, Hugo and Blais, it is well established in the prior art to form the striking surface or front surface of the stripping element with a beveled or conical edge to aid in the cutting action between the punch and die and would have been obvious to have similarly modified the Wales stripper to also possess a beveled edge as an application of a known improvement to a known device for a predictable result and as taught by Blais to not be a highly critical aspect of the invention.

In regards to claim 2, the modified device of Wales discloses where the stripping element (65/ Taylor 27) has a cross-sectional shape with no rotational symmetry (Taylor Fig. 4).

In regards to claim 3, the modified device of Wales discloses wherein the hole (not numbered containing the stripper 65/ Taylor vertical bore 25) has an elongated or polygonal shape (Taylor Fig. 4).

In regards to claim 5, the modified device of Wales discloses wherein the guide element (punch holder 94/ Taylor 22) comprises at least one guide sleeve (cylindrical portion of 94) arranged outside the stripping element (65), at least partially surrounding the stripping element in a guiding manner.

In regards to claim 7, the modified device of Wales discloses at least one guide surface (the noncircular mating surface) between the stripping element (65) and the guide element (94) with a length which provides for tilt free guidance in the same

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structural relationship as shown by applicant. As applicant has provided no additional structural relationship to meet the limitations of tilt-free guidance, it is considered that Wales anticipates this claim. The limitations of “can be selected as a function of the forces acting on the stripping device” do not impart any structural component to the length and are also a conditional phrase, which are not positively recited

In regards to claim 8, the modified device of Wales discloses wherein the stripping element (65/ Taylor 27) has an essentially straight (around the tip 36) and protruding section (64/Fig 7), and wherein the stripping device comprises guide surfaces on the straight and protruding sections of the stripping element (the outer surface of the stripping element and inner surface of the guide correspond to allow relative movement between the two).

In regards to claim 9, the modified device of Wales discloses wherein the stripping element (65/ Taylor 27) has at least one guide surface on its inside facing the fitted cutting element (66) and the stripping element (65) and the spring elastic element (41) are orientated, surrounding the cutting element (66), in such a manner that they can be loaded in a manner essentially free from torque (see Taylor Figs. 1/4). The stripping element and spring are loaded linearly without twisting such as would be in a torque inducing threading action.

In regards to claim 11, the modified device of Wales discloses wherein the fastening piece (screw 60) and the guide element (94/ Taylor 22) are formed as elements which can be joined together (see Figure 5).

In regards to claim 12, the modified device of Wales discloses wherein the spring elastic element (41) is arranged between the guide element (94) and the cutting tool (66) within the guide element (94).

In regards to claim 14, the modified device of Wales discloses wherein the stripping element (65/ Taylor 27) has a front surface (bottom facing surface) corresponding to (engages) the workpiece.

In regards to claim 15, the modified device of Wales discloses that the spring elastic element (stripper/ejector spring 41) is of a spring-elastic, restoring or flexible material. Although Wales does not specifically state what material the spring is made of, inherently a spring is made of an elastic or flexible material, or it wouldn't be a spring.

In regards to claim 17, the type of forces have no bearing on the structure claimed and do not distinguish over the structure of the prior art and the guide surface length is capable of being replaced with another guide of varying lengths according to a variety of motivating factors including shearing and lateral forces.

In regards to claim 18, Wales discloses wherein the guide surface (square circumference of 65 ; Figure 10)) faces a stem (66) of the fitted cutting element.

In regards to claim 19, the modified device of Wales does not positively disclose the material of the front surface of the stripping element, however, as claim 19 leaves the actual material open to selection, no particular material is being positively claimed. It is shown from at least the drawings that the bottom or front surface of the stripping element is flat and engages with the flat surface of the workpiece. Therefore, Wales anticipates the language of the claim where the front surface is matched to a shape of

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the workpiece surface. The limitation that the material is machined is a broad product by process limitation, where not only could several manufacturing options be considered as machining processes, but that these processes do not define over the structure of the prior art. Even though the product by process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985)

In regards to claim 20, the modified device of Wales discloses wherein the at least one fastening piece (screw, 60) is for detachably fastening the stripping device to the cutting tool.

In regards to claim 21, the modified device of Wales discloses wherein the spring elastic element (41) surrounds the cutting element (66).

In regards to claim 23, the modified device of Wales discloses wherein the stripping element (65/ Taylor 27) has a curved front surface (see Taylor Fig. 4).

In regards to claim 24, the modified device of Wales discloses wherein the front surface has a non-zero bevel angle (as shown by Vlahek, Hugo and Blais)

In regards to claim 25, the modified device of Wales discloses wherein the front surface comprises a first surface portion at a non-zero angle to a second surface portion (as provided for by the bevel angle modification as taught by Vlahek, Hugo and Blais).

In regards to claim 27, the modified device of Wales discloses wherein the front surface is capable of being shaped in accordance to a shape of the workpiece. The workpiece is not being claimed, and the punch is capable of punching a workpiece having the same shape as the punch.

6. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wales (U.S. Patent 2,168,377) in view of Taylor (U.S. Patent 2,760,574).

In regards to claim 4, the modified device of Wales does not disclose wherein the stripping element (65/ Taylor 27) has a cross-sectional shape with three straight sides and one curved side. However, the modified device of Wales does detail a stripping element with a cross sectional shape that does not permit its rotation relative to the guide element. There are numerous, almost an infinite number of plausible shapes that do not have rotational symmetry what would not permit the stripping element to rotate relative to the guide element. The particular shape as disclosed by the instant invention comprising a cross-sectional shape with three straight sides and one curved side is not critical to the non-rotational aspect. It would have been an obvious matter of design choice to make the different portions of the cross-sectional shape of the stripping element of whatever form or shape was desired or expedient. A change in form or shape is generally recognized as being within the level of ordinary skill in the art, absent any showing of unexpected results. *In re Dailey et al.*, 149 USPQ 47.

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7. Claims 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wales (U.S. Patent 2,168,377) in view of Taylor (U.S. Patent 2,760,574) and in further view of Vlahek (U.S. Patent 4,428,262), Hugo (U.S. Patent 4,246,815) and Blais (U.S. Patent 3,465,634). The modified device of Wales does not disclose that the front surface has a bevel angle between 5 and 10 degrees. However, as previously discussed, Blais discloses that this feature is not a critical aspect of the surface. Furthermore, both Vlahek and Hugo disclose a slight beveled curvature, implying a small bevel angle. Therefore, although neither Vlahek, Hugo, or Blais specifically detail a 5 to 10 degree angle, as the feature is not critical to the design and as the feature appears to be shown by at least Vlahek and Hugo, it would have been obvious to one having ordinary skill in the art at the time of the invention as an obvious matter of design choice to have made the bevel angle between 5 and 10 degrees, since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955).

Response to Arguments

8. Applicant's arguments with respect to claims 1-5, 7-9, 11-12, 14-15, 17-20, and 24-27 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

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9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to LAURA M. LEE whose telephone number is (571)272-8339. The examiner can normally be reached on Monday through Friday, 8:00am to 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Boyer Ashley can be reached on (571) 272-4502. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Laura M Lee/
Examiner, Art Unit 3724
7/19/2010